



NATIONAL INSTITUTE OF ARTHRITIS AND METABOLIC DISEASES  
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NATIONAL INSTITUTE OF NEUROLOGICAL DISEASES AND BLINDNESS  
THE CLINICAL CENTER  
DIVISION OF RESEARCH GRANTS

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Dear Joshua

We have not yet received Morse's\* comments on Kiposh's paper; we are otherwise ready to send them to 'Science'. — We have a new lightening test for screening between Gal kinase-less (& Gal permease-less) and Pgal and/or transgalactosylase (& 4-epimerase-less). The first category is not inhib. by having galactose present together with glucose whereas <sup>in</sup> the latter ~~stops growth~~ category the mix of the two sugars gives a very strong growth inhibition. The exp. was done partly with the purpose of throwing light on the pathological symptoms in Congen. Galactosemia. It is almost evident now that it is gal-1-P<sup>acc</sup> (and not galactose acc. which is responsible for the growth inhibition. It could be due to gal-1-P being an enzyme inhibitor and that is to some extent the case. Ginsburg has shown that gal-1-P

inhibition of  $\text{USP6}$  pyrophosphorylase. I believe,  
however that the growth inhibition is  
rather due to a 'bleeding out' of ATP, somewhat  
like dinitrophenol. ~~Wakaba~~ Kurahashi has exper-  
iments which support this latter view.

We must have a discussion the 20<sup>th</sup> & 21<sup>st</sup>

Sincerely

H. R. H.